AMENDMENTS TO THE CLAIMS

1. (Original) A method for treating an implant surface intended for implantation into bone tissue c h a r a c t e r i s -e d in providing a microroughness comprising pores and peaks having a pore diameter of ≤ 1 μm, a pore depth of ≤ 500 nm, and a peak width, at half the pore depth, of from 15 to 150% of the pore diameter.

2. (Original) A method according to claim 1, wherein the pore diameter is within the range of 50 nm to 1 μm and the pore depth is within the range of 50 to 500 nm.

3. (Currently Amended) A method according to claim 1 ~~or claim 2~~, wherein a root-mean-square roughness (R_q and/or S_q) of ≤ 250 nm is provided.

4. (Currently Amended) A method according to ~~any one of claims 1-3~~ claim 1, wherein the implant surface is a metallic implant surface.

5. (Original) A method according to claim 4, wherein the microroughness is provided by treating the metallic implant surface with an aqueous solution of hydrofluoric acid.

6. (Original) A method according to claim 5, wherein the concentration of the hydrofluoric acid is less than 0.5 M.

7. (Original) A method according to claim 6, wherein the metallic implant surface is treated for an etching period of up to 180 sec at room temperature.

8. (Original) A method according to claim 7, wherein the concentration of the hydrofluoric acid is 0.1 M and the etching period is up to 60 sec at room temperature.

9. (Currently Amended) A method according to ~~any one of claims 1-8~~ claim 1, further comprising providing a macroroughness on the implant surface prior to providing the microroughness.

10. (Original) A method according to claim 9, wherein the macroroughness is provided by blasting the implant surface.

11. (Currently Amended) A method according to ~~any of claims 1-10~~ claim 1, wherein said metallic implant surface is made of commercially pure titanium or an alloy of titanium.

12. (Currently Amended) An implant for implantation into bone tissue having an implant surface at least part of which has been treated with a method according to ~~any of claims 1-11~~ claim 1.

13. (Original) An implant for implantation into bone tissue having an implant surface c h a r a c t e r i s e d in that at least a part of the implant surface comprises a microroughness which

comprise pores and peaks having a pore diameter of ≤ 1 μm, a pore depth of ≤ 500 nm, and a peak width, at half the pore depth, of from 15 to 150% of the pore diameter.

14. (Original) An implant according to claim 13, wherein the pore diameter is within the range of 50 nm to 1 μm and the pore depth is within the range of 50 to 500 nm.

15. (Currently Amended) An implant according to claim 13 ~~or claim 14~~, wherein the microroughness has a root-mean-square roughness (R_q and/or S_q) of ≤ 250 nm.

16. (Currently Amended) An implant according to ~~any one of claims 13-15~~ claim 13, wherein the implant surface further comprises a macro-roughness.

17. (Currently Amended) An implant according to ~~any one of claims 13-16~~ claim 13, wherein said implant is a metallic implant.

18. (Original) An implant according to claim 17, wherein said metallic implant is made of commercially pure titanium or an alloy of titanium.

19. (Currently Amended) An implant according to ~~any one of claims 13-18~~ claim 13, wherein the implant is a dental implant.

20. (Currently Amended) An implant according to ~~any one of claims 13-18~~ claim 13, wherein the implant is an orthopaedic implant.